said authorization token including the payment amount, order description, timestamp, a random nonce plus a merchant identifier and a reference to the consumer's credit or debit card number; and

said merchant's computer receiving said authorization token and fulfilling said order description.

50. (NEW) The system of Claim further comprising:

means for providing the merchant's digital signature and matching certificate to the consumer's computer; and

means for the issuing gateway to sign the authorization token.--

REMARKS

Reconsideration and allowance of the claims in the application are requested.

Claims 1-45 are in the case. The drawings were objected to because of minor informalities. A proposed drawing correction is required in the response to the office action. The specification has been objected to because of informalities relating to the description of Fig. 2A and Fig. 4. Claim 27 has been rejected under 35 U.S.C., second paragraph as indefinite in the use of the term "Japanese Payment Options" or "Special Payment Arrangements". Claims 1-14 and 16-15 have been rejected under 35 U.S.C. §103(a) as unpatentable over: (1) U.S.P. 5,715,314 to A.C. Payne et al., issued February 3, 1998, filed October 24, 1994 (Payne) in view of (2) U.S.P. 5,671,279 to T. Elgamal issued September 23, 1997 (Elgamal); (3) Anderson et al., "Description of Financial Agent Secured Transactions (FAST) Authentication; (4) Financial Technology Consortium, Fourth Draft, December 2, 1998 (FAST); (5) Commerce PCT

Application WO 95/16971 to D.K. Gifford, Published June 22, 1995 (Gifford) and (6) a publication entitled electronic payment systems by D.O. Mahony et al., published Artech House, Inc. Norwood Ass., 1997 (O'Mahony). Claim 15 has been rejected under 35 U.S.C. 103 (a) as unpatentable over Payne, Elgamal, Gifford, Anderson and O'Mahony, of record in further view of (7)U.S.P. 5,822,737 to M. E. Ogram, issued October 13, 1998(Ogren)

Applicant's attorney thanks the Examiner Richard W. Hess and Supervisory Patent Examiner James P. Trammell for the courtesy of an Interview conducted August 7, 2000. The Interview is summarized in the Interview Summary, dated August 7, 2000. Applicant's attorney also thanks Examiner Hess for providing a copy of the reference Anderson et al., "Description of Financial Agent Secured Transactions (FAST) Authentication which Applicant's attorney misplaced.

A corrected drawing is provided for the Examiner's review. The specification has been amended to overcome the Examiner's objections. Independent Claims 1, 26, 27, 28, 33 and 34 have been amended to further distinguish the invention from the cited art. Claim 25 has been amended to delete the terms to which the Examiner objects. Claims 46 – 50 have been added to obtain protection for another form of the invention

Before responding to the rejection Applicant would like to distinguish the cited art from the present invention as follows:

1. Payne discloses a three party payment protocol in a network server system, involving a buyer computer, a merchant computer and a payment-issuing computer, all connected together in a network. A purchase begins when a user browses through an advertisement document of a merchant and requests a product. The buyer computer sends a

payment URL to the payment computer. The URL includes a product identifier; a domain identifier; a payment amount; a merchant computer identifier; a merchant account identifier; an expiration time for a transaction; a buyer network address and a payment URL authenticator which is a digital signature based on a cryptographic key shared by the merchant and the operator of the payment computer. When the payment computer receives the payment URL, the payment URL authenticator is verified. Afterwards, the payment computer determines whether the expiration time has passed; checks the buyer computer network address and returns a confirmation document to prompt the user to click on a "continue" button. The payment computer instructs the buyer computer to provide the account name and password that the user enters. The payment computer verifies whether the user name and password are correct. Afterwards, the payment computer verifies whether the user account has sufficient funds or credit and if so, creates an access URL or token that includes a merchant identifier; a domain identifier; a product identifier; an indication of the end of the duration time for which access to the product is to be granted; the buyer network address and an access URL authenticator which is a digital signature to bind a key shared by the merchant and the payment computer. The payment computer records the product identifier; the domain, user account, the merchant account the end of duration time and the actual payment and a settlement database. A re-direct to access URL is sent to the buyer computer which sends the access URL to the merchant computer. The merchant verifies the access URL authenticator and a duration time for access to the price and whether the duration time or access to the product has been expired. The buyer computer network address is verified so a fulfillment document is sent to the buyer computer which is displayed to the user.

The present invention (Linehan) is distinguishable from Payne, in the following respect:

a) Linehan discloses a four-party payment protocol. Payne discloses a three-party payment protocol. Specifically, the present invention includes an acquiring bank gateway which is not shown or suggested in Payne. A four party protocol enables a merchant to have a relationship with a bank entirely different from the buyer's bank

b) In Linehan, an acquiring bank digital certificate is sent from the merchant computer to the consumer computer. The Payne merchant does not provide an acquired bank digital certificate to the user because Payne fails to disclose an acquirer bank and gateway.

c) Linehan validates the merchant certificate and acquiring certificate at the issuer gateway to prove that the merchant and issuer share a common financial arrangement. Payne does not disclose and acquirer digital certificate or the consumer computer sending an authorization to the merchant computer an authorization token, and issues a digital certificate a wallet initiation message and a reference to the consumers credit or debit card number. Payne only sends an access URL to the merchant computer.

d) In Linehan an authorization token includes a payment amount, payment order description, time span random nonce plus a merchant identifier and a reference to the consumers credit or debit card number. Payne sends a different access URL or token including the duration time; buyer network address and URL authenticator, none of which are included in the present invention.

2. Elgamal, like Payne, discloses a three-party payment protocol in a network sales system which includes a buyer computer, a merchant computer and payment gateway representing an acquiring bank. A customer application prepares a purchase order and payment instruction message using a credit card number. The merchant receives the order and prepares

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and sends it to the issuing bank with the payment instruction for authorization. An authorization request may cause an immediate capture transaction if the merchant is ready to ship the merchandise at the authorization time. The acquirer (issuer) checks the correctness of the order; the payment instruction fields and performs an authorization for the required amount. If successful, the (acquired) issuer returns a signed message that includes the authorization ID. If not successful, a denial code is sent. The merchant receives the authorization ID that may be forwarded to the customer for proof of authorization for immediate delivery of the goods . The funds are transferred between accounts using the bank's network. The merchant sends a settlement message at the end of the day using a settlement request message.

The present invention is distinguishable from Elgamal in the following respects:

a) Linehan is a four party payment protocol not a three party protocol disclosed in Elgamal. A four party protocol enables the merchant to have a relationship with a bank entirely different from the buyer's bank.

b) In Linehan, the merchant message to the consumer computer includes a digital certificate from an acquiring bank.. Elgamal does not disclose an acquiring bank, but sends an issuer digital certificate to the computer which is not an acquirer digital certificate.

c) Linehan sends a consumer's identity; authentication information and merchant message to an issuing gateway. Elgamal fails to disclose the consumer sending a message to the gateway. All purchase activities are conducted between the merchant and gateway or merchant and consumer.

d) Linehan validates the merchant certificate and the acquired certificate at the issuer gate to prove that the merchant and issuer share a common financial arrangement. Elgamal does not validate the merchant certificate and the acquired certificate because no acquired bank is

disclosed in Elgamal.

e) Linehan discloses an authorization token, an issuers digital certificate with a initiation message and a reference to the customers credit or debit card number being sent to the merchant computer. Elgamal discloses a capture response including a validity period an order hash an amount an order number and transaction ID. Elgamal does not disclose sending the issuers digital certificate or wallet initiation message to the merchant.

f) Linehan discloses an authorization token including a description, time span, random nonce plus merchant identifier in reference to the consumer credit or debit card number sent to the merchant computer. The Elgamal gateway does not send a random nonce or merchant identifier or credit or debit card number. The combination of a signed authorization token and certificate backed digital certificates is not disclosed Elgamal.

3. Gifford discloses a three-party payment protocol which includes a merchant computer having a digital advertisement database; a buyer computer and a payment computer linked together in a network. The merchant advertisement data is accessed by the buyer computers. The buyer computer allows the user to purchase products described in the advertisement. The form of payment can be requested after purchases initiated. A payment system performs payment authorization. The payment system obtains account authorization from an external financial system. Payment orders are signed with authenticators. The payment system executes payment orders. The payment order includes a sender, a beneficiary, a payment amount and a nonce identifier. The payment order is signed by the consumer computer with an authenticator as checked by the payment system. Payment orders are backed by accounts in a banking system authorized by the network payment system by sending messages into a financial authorization network that knows the status of the accounts payment. If payment system

accomplishes settlement by sending messages into an existing financial system network.

The present invention is distinguishable from Gifford, as follows:

a) Linehan discloses a four-party payment protocol.. Gifford discloses a three-party payment protocol.

b) In Linehan a merchant message to a consumer computer includes a wallet initiation message, a merchant digital signature and digital certificate from an acquiring bank. Gifford fails to disclose a merchant message including a digital certificate from an acquiring bank since there is no disclosure of an acquiring bank in Gifford.

c) In Linehan the consumer computer sends the merchant message, consumer identity and authentication information to the issuing bank. Gifford discloses a buyer computer sending the consumer message to the merchant computer and not the payment computer.

d) In Linehan, the merchant certificate and acquirer certificate are validated at the issuing gateway. The Gifford payment computer does not validate the merchant certificate and the acquired certificate. There is no disclosure of an acquirer bank in Gifford.

e) In Linehan, the issuing gateway sends to the merchant computer an authorization token, issuer's digital certificate, wallet initiation message and a reference to the consumer's debit or credit card number. Gifford fails to disclose sending an authorization token to the merchant computer.

4. O'Mahony only describes a cyberCash purchase system. There is no other disclosure in O'Mahony related to the present invention of a four party payment protocol in an electronic sales system.

5. Anderson only describes the FAST protocol for secure ATM transaction. There is no other disclosure in Anderson related to a four party payment protocol in an electronic sales

system described in the present invention.

6. Ogram discloses a three-party payment protocol in which the payment computer is linked to a bank for verification of credit card and amount. The bank transmits and authorization to the payment processing computer. Afterwards, the link or connection with the bank is terminated by the payment-processing computer and proceeds to process the customer transaction, The payment computer links the customer computer back to the merchant computer which provides a password for access to the merchant information or establishing shipping instructions for payment.

The present invention is distinguishable from Ogram, as follows:

a) Linehan discloses a four-party payment protocol. Ogram discloses a three-party payment protocol is disclosed.

b) In Linehan , a merchant message to a consumer computer includes a digital certificate from an acquiring bank. Ogram fails to disclose the bank providing a digital certificate. Further in Linehan, the issuer gateway validates the merchant certificate and acquirer certificate. Ogram fails to disclose the payment computer validating the merchant certificate and acquiring bank certificate.

Summarizing, all of the references, alone or in combination, fail to show or suggest a four-party payment protocol in an electronic sales system wherein a merchant computer sends a message to a consumer computer including a digital certificate from an acquiring bank; the issuing computer validating the merchants certificate and the acquired certificate and sending the validation by an authorization token including issuing a digital certificate, a wallet initiation message and a reference to a consumer credit or debit card number to a merchant computer for fulfilling a consumer purchase.. Without such teachings in the cited art, Applicant submit there is

no basis for a worker skilled in the art to implement the invention as defined in Claims 1-45.

Now turning to the rejections, Applicant provides responses to the indicated paragraph of the office action, as follows:

REGARDING PARAGRAPHS 2/3:

Applicant has attached a proposed drawing correction in response to the Office Action. Approval of the drawing correction is requested.

REGARDING PARAGRAPH 4:

The specification and drawing have been amended and are believed to overcome the objections to the specification. Withdrawal of the objections to the specification and drawing are requested.

REGARDING PARAGRAPH 5/6

Applicant notes that Claim 25 not Claim 27 includes the terms "Japanese Payment Option" and 'Special Payment Arrangements". Claim 25 has been amended to delete the terms and "Japanese Payment Option" and "Special Payment Arrangement" and substitute "offering the consumer a payment schedule condition on the merchants name from the merchants digital certificate and the amount of payment from the initiation message" which the specification at page 21, lines 22 –25 describes Japanese Payment Options and special payment arrangements.

Applicant submits that the amended claim more accurately reflects special business arrangements that are common in Japan and elsewhere. Entry of the amendment and withdrawal of the rejection of Claim 25 under 35 U.S.C. §112/2 are requested.

REGARDING PARAGRAPH 7/8:

Independent Claims 1, 26, 27, 28, 33 and 34 include limitations which distinguish over Payne, Elgamal , Anderson and O'Mahoney, alone or in combination, as follows:

a)"...forming a four party payment protocol for electronic sales, the four party payment protocol including a consumer's computer coupled to a merchant's computer and to an issuing bank computer via an issuer gateway, the merchant computer being further coupled to an acquirer bank computer;..." None of the cited art discloses a four party payment protocol in an electronic sales network

b) "...sending from a merchant computer over an Internet work to Internet network to a consumer's computer, a merchant message including ...a digital certificate from an acquiring bank..."

None of the cited references disclose a four-party payment protocol including an acquiring bank. Accordingly, without such bank neither the merchant nor the payment or issuing computer can send an acquired digital certificate. Elgamal discloses the message from the merchant including the issuers digital certificate and not an acquirers digital certificate.

c)"...validating at said issuer gateway the merchant certificate and the acquired certificate to prove that the merchant and issuer share a common financial arrangement;"

None of the cited art validates the merchant certificate and the acquired certificate because none disclose an acquirer bank.

d) "...sending over said Internet network and authorization token, an issuer digital certificate, said wallet initiation message and a reference to said consumer's credit or debit card number;"

None of the cited references discloses sending an authorization token in combination with other transaction information, e.g. issuer's digital certificate, etc. Payne resends an access URL and no other transaction information. See column 7, lines 18-30. Elgamal discloses sending a capture response, validity, order hash, amount, order number and transaction

ID. No authorization token is included in the response. See column 1, lines 60-67.

e) "...said merchant's computer receiving said authorization token."

None of the references disclose sending the authorization token to the merchant. Payne discloses sending the authorization token to the consumer for transfer to the merchant. Elgamal discloses those gateway sending the capture response to the merchant. Further, Elgamal does not disclose an authorization token. Gifford operates in the same manner as Payne.

SUMMARIZING:

Applicant submits that the above-designated features distinguish Claims 1, 26, 27, 28, 33 and 34 from the cited references, taken alone or in combination. The failure of the cited reference to incorporate these teachings does not provide a basis for a worker skilled in the art to implement the invention as defined in the Claims. Withdrawal of the rejection of Independent Claims 1, 26, 27, 28, 33 and 34 under 35 USC 103 (a) is requested.

REGARDING CLAIM 2:

Claim 2 is patentable on the same basis as Claim 1.

REJECTION REGARDING CLAIM 3:

Payne does not disclose sending a wallet initiation message including a nonce to the consumer computer. Payne only discloses the merchant computer sending advertisement document to the buyer computer. After selection of a product from the document, the buyer computer sends a payment URL to the payment computer. See column 5, lines 20-30. There is no disclosure of a wallet initiation message or a nonce in Payne. Nor is there any disclosure in of a wallet initiation message in Elgamal, see column 26, lines 13-67. Without a disclosure of nonce in either Payne or Elgamal there is no basis for rejection under 35 USC 103 (a). Withdrawal of the rejection of Claim 3 under 35 U. S.C. 103(a) is requested.

REGARDING CLAIM 4:

In Payne, the merchant computer only verifies whether the access URL authenticator was created from the contents of the access URL using the cryptographic key. Payne fails to disclose the merchant verifying the authorization token. Likewise, in Elgamal there is no authorization token. Without a disclosure of these claimed features claimed in the cited art , there is no basis for a rejection of Claim 4 under 35 U.S.C. 103(a). Withdrawal of the rejection of Claim 4 is requested.

REGARDING CLAIMS 5 AND 6:

Claims 5 and 6 are patentable on the same basis as Claim 1 from which they depend. Withdrawal of the rejection of Claims 5 and 6 is requested.

REGARDING CLAIMS 7-14:

Claims 7-13 are patentable on the same basis as claim 1 from which they depend. Withdrawal of the rejection of Claims 7 – 13 is requested.

REGARDING CLAIM 16:

Contrary to the Examiner's statement, column 6, lines 15-29 in Payne do not describe an alias number but rather a new account number. Applicant submit that a new account number is not believed to be the same as an alias number which prevents the use of the consumer credit card number without the authorization token.. Withdrawal of the rejection of claim 16 is requested.

REGARDING CLAIM 17:

Contrary to the Examiner's suggestion, there is no disclosure in Payne or Gifford or Elgamal of an acquire gateway. All of the references describe a three-party, a payment protocol and not four party payment protocol as in the present invention. Withdrawal of the rejection of

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Claim 17 is requested.

REGARDING CLAIM 18 - 23:

Applicant requests a reference to support the Examiner's use of official notice in rejecting Claims 18 - 23. A reference is believed necessary, particularly, when Payne and related references only describe a three party payment protocol whereas Applicant's invention describes four-party payment protocol.

REGARDING CLAIM 24:

Contrary to the Examiner's statement, Elgamal fails to disclose an authorization token and acquirer gateway for receiving a new authorization token. Without such disclosure there is no basis for the rejection of Claim 24 under 35 U.S.C. 103(a). Withdrawal of the rejection of Claim 24 is requested.

REGARDING CLAIM 25:

Claim 25 has been amended to describe specific conditions of a payment schedule. The specific conditions are not shown or suggested in Elgamal. Without such disclosure , Claim 25 is believed to be patentable over the cited references. Withdrawal of the rejection of Claim 25 under 35 USC 103 (a) is requested.

REGARDING CLAIM 26, 27 and 28

Claims 26, 27 and 28 are implementations of Claim 1 in alternative claim format. Claims 26, 27 and 28 are patentable on the same basis as Claim 1. Withdrawal of the rejection of Claims 26 – 28 is requested

REGARDING CLAIMS 29, 30 AND 31:

Claims 29, 30 and 31 track Claims 2, 3 and 4 and are patentable on the same basis thereof. Withdrawal of the rejection of Claims 29-31 is requested.

REGARDING CLAIM 32:

Claim 32 depends upon Claim 28 and is patentable on the same basis thereof. Withdrawal of the rejection of Claim 32 is requested.

REGARDING CLAIM 33:

Claim 33 describes an acquiring bank digital certificate in a four party payment protocol. The cited art discloses a three-party payment protocol which does not include an acquiring bank or an acquiring bank digital certificate. Withdrawal of the rejection of Claim 33 is requested.

REGARDING CLAIM 34:

Claim 34 describes a four-party payment protocol including a description of the acquiring bank digital certificate. The cited art discloses a three-party payment protocol which excludes an acquiring banks digital certificate. Without a disclosure of an inquirer bank digital certificate in the cited art there is no basis for the rejection of Claim 34. Withdrawal of the rejection of Claim 34 is requested.

REGARDING CLAIMS 35-39:

Claims 35 - 39 depend upon Claim 34 and are patentable on the same basis. Withdrawal of the rejection of Claims 35-39 is requested.

REGARDING CLAIMS 40-42:

Claims 40-42 describe a four party payment protocol by the incorporation of a acquiring bank and an acquiring banks digital certificate. Moreover, the merchant interacts directly only with the acquirer bank whereas the consumer computer interacts directly only with the issuing bank. Without such feature in the cited art there is no basis for rejecting Claims 40-42.

Withdrawal of the rejection of Claims 40-42 is requested.

REGARDING CLAIM 43:

Payne discloses a merchant and a payment computer using the same key to verify a URL authenticator. See column 5, lines 56-60. Claim 43 describes comparing the hash of the order description with a locally computed hash which indicates that two different keys are used in the present invention and not the same key as in Payne. Withdrawal of the rejection of Claim 43 is requested.

REGARDING CLAIMS 44, 45:

Claims 44 and 45 depend directly or indirectly upon Claim 34 and are patentable on the same basis thereof. Withdrawal of the rejection of Claims 44 and 45 is requested.

CONSIDERATION OF CITED BUT NOT APPLIED PRIOR ART:

Applicant has examined the references cited by the Examiner and concludes they are cumulative to the art cited by the Examiner.

PATENTABILITY SUPPORT FOR NEW CLAIMS 46 – 50:

Claim 46 tracks Claim 1 without authenticating the merchant using the merchant's digital signature and matching certificate. In many electronic sales there is no need to authenticate the merchant because the payment will eventually go to whatever merchant is identified in the payment. the banking system can retrieve the merchant payment. The reduction of certificate expedites processing transaction in the payment system.

Claim 47 depends upon Claim 46 and re-installs the merchant authentication in the claim

Claim 48 depends upon claim 46 and further describes the issuing bank signing the authorization token

Claims 49 and 50 are the system versions of Claims 46 – 48.

Claims 46 – 50 are patentable over the cited as describing a four party payment protocol

in an electronic sales system with messaging among the parties executing an electronic sale requiring signed authorization tokens and supporting digital certificates to validate both transaction and the parties to the transactions. Applicant submits the cited art fails to show these features, taken alone or in any combination. Entry of Claims 46 – 50 and allowance thereof are requested.

CONCLUSION:

Having submitted a proposed correction to the drawing, amended the specification to overcome objections; amended Claim 25 to overcome the rejection under 35 U.S.C. § 112/2; amended and distinguished Claims 1-45 from the cited art, and supported the patentability of new Claims 46 – 50, Applicant requests entry of the amendment, allowance of the claims and passage to issue of the case.

The Assistant Commissioner is hereby authorized to charge any additional fees which may be required for the timely consideration of this amendment under 37 C.F.R. §§ 1.16 and 1.17, or credit any overpayment to Deposit Account No. 09-0464, Order No. SE9-98-031.

Respectfully submitted,

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Dated: August 9, 2000`

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